

Remarks

This REQUEST FOR CONTINUED EXAMINATION and REPLY is in response to the Office Action mailed July 25, 2007. The fee for addition of new claims is enclosed herewith. Also submitted herewith is a Petition for Extension of Time, together with the appropriate fee.

I. Summary of Examiner's Rejections

Prior to the Office Action mailed July 25, 2007, Claims 1-15, 17, 24-27 and 29-37 were pending in the Application. In the Office Action, all of the claims were rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al. (U.S. Patent Publication No.2002/0087514, hereinafter Payne) in view of Danielsen et al. (U.S. Patent No. 6,993,723, hereinafter Danielsen).

II. Summary of Applicant's Amendment

The present Reply amends Claims 1, 24, 29, 32, 33, 36 and 37; and adds new Claims 38-60, leaving for the Examiner's present consideration Claims 1-15, 17, 24-27 and 29-60. Reconsideration of the Application, as amended, is respectfully requested.

III. Claim Rejections under 35 U.S.C. §103(a)

In the Office Action mailed July 25, 2007, Claims 1-15, 17, 24-27, 29-37 were rejected under 35 U.S.C. 103(a) as being unpatentable over Payne (U.S. Patent Publication No.2002/0087514) in view of Danielsen (U.S. Patent No. 6,993,723).

Claim 1

Claim 1 has been amended to more clearly define the embodiment therein, and to further distinguish the embodiment from the cited references. As amended, Claim 1 defines:

1. *(Currently Amended) A system for session-based retrieval at a client system of content from a server system, comprising:
a communication protocol that enables an asynchronous connection over a network between a client system and a server system, and allows the client system to send via the network, and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, to query the*

server system for string-based content, while receiving an asynchronous response from the server as the characters are being input;

a client object, in communication with a client software at the client system and with the communication protocol, wherein the client object receives additional characters from the client software, and as consecutive characters are being received, transmits via the network to a server object at the server system a plurality of consecutive queries, within the same session, to retrieve content from the server system, wherein each consecutive query lengthens the string by the additional characters, to form a lengthening string for retrieving matching content from the server system; and

a server object, in communication with the server system, and with the client object via the communication protocol, wherein the server object in response to receiving the consecutive queries that form the lengthening string, automatically uses the lengthening string to query and retrieve content information from the server system that matches the lengthening string, and wherein the server object asynchronously returns, while the additional characters are being input and the string is being lengthened during the session, increasingly matching content information to the client object for immediate use by the client system.

Claim 1 has been amended to more clearly define that the communication protocol enables an asynchronous connection *over a network* between a client system and a server system. The communication protocol allows the client system to send via the network, and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, *while receiving an asynchronous response from the server as the characters are being input*. The client object receives additional characters from the client software, and as consecutive characters are being received, transmits *via the network* to a server object at the server system a plurality of consecutive queries, within the same session, to retrieve content from the server system.

Payne discloses a query input technique in which a user supplies a few character-based queries and is able to retrieve and display at least as portion of a record from a structured database. (Abstract). As disclosed by Payne, a display screen 200 is conventionally used to retrieve and display a record from a database. Screen 200 typically provides an entry area 202 in which a user can type in an index or query at cursor position 204. (Paragraph [0017]). In

accordance with an embodiment, a user supplies a few character-based queries to retrieve and display a record from a structured database. For every alphabetical character the user enters from a numerical keypad, a progressively reduced list of indexes that start with the entered characters is displayed. When a desired index identifying the record is among those indexes being displayed, the user may cease the character entry and scroll a zoom window upon the desired index to explore the full record. In accordance with another embodiment, the invention is a method for displaying a record from a structured database on a display screen of an electronic device having a reduced-size input interface. In accordance with another embodiment, the invention is a method for displaying a record from a structured database on a screen, the record including at least one field and indexed by a desired index comprising a string of characters. (Paragraphs [0022]-[0024]). FIG. 6 illustrates an internal functional block diagram of a portable device in which the invention may be practiced. Portable device 600 may include, but not be limited to a cellular phone, a two-way pager, a palm-sized computing device, and a personal digital assistant. The portable device also has a small screen (i.e., reduced-size screen) that may be a LCD screen. Screen 602 is communicated with and commanded by a screen driver 604 that is controlled by a microcontroller (processor) 606. According to one implementation, a structured database 614 is loaded in memory 610 that further includes code for a lookup process 616. When device 600 is powered on, both application module 612 and lookup process 616 are executed on microcontroller 606. Input interface 630 coupled to and controlled by microcontroller 606 receives inputs (queries) from a user. (Paragraph [0065]).

Danielsen discloses a system, method and program are provided for listing activities in a graphical user interface in a collaborative work tool framework. (Abstract). As disclosed by Danielsen, the invention therein is a platform-independent tool that supports both asynchronous and synchronous sessions, independent of the physical whereabouts of the participants. The invention offers a range of activities - such as brainstorming and discussion. Advantageously, the invention provides ease of installation and use, over 300 session participants at a time, high level of security, client-server architecture support, and dial-up capability. (Column 4, lines 22-30). In accordance with an embodiment, in operation 104, participant users are allowed to conduct activities utilizing the activity data, wherein meeting data is created based on the conducted activities. A session report is then generated based on the activity data and the meeting data, as

indicated in operation 106. Finally, in operation 108, the session data is stored in a database, wherein the database is capable of being queried for a particular session at a later date. (Column 4, lines 14-22). The terms asynchronous/synchronous refer to the time-aspect of the meeting hosted on the groupware. With the term asynchronous it is meant that the participants do not have to be attending the session simultaneously. Synchronous tools open up for real-time meetings, i.e. all participants are collaborating at the same time. (Column 5, lines 1-7).

Applicant respectfully submits that, based on the above description, it appears that, in Payne, the client and the database it accesses must reside on the same physical device for proper operation, i.e. there does not appear to be any separation between the client and its database (or between, e.g. a client and a server). Claim 1 has been amended to more clearly define that, in the embodiment therein, the communication protocol enables an asynchronous connection *over a network* between a client system and a server system, and allows the client system to send via the network, and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, *while receiving an asynchronous response from the server as the characters are being input*. The client object receives additional characters from the client software, and as consecutive characters are being received, transmits, again *via the network* to a server object at the server system a plurality of consecutive queries, within the same session, to retrieve content from the server system.

Applicant further respectfully submits that, based on the above description, it appears that, in Danielsen, the system may be considered asynchronous only within the context of distinguishing real-time data conferencing (i.e. synchronous conferencing) from non real-time data conferencing (i.e. asynchronous conferencing). Danielsen uses the term “asynchronous” to refer to the time-aspect of the meeting, and further describes that the term asynchronous is meant that the participants do not have to be attending the session simultaneously. Claim 1 has been amended to clearly distinguish the use of this term, and to more clearly define that, in the embodiment therein, it is the communication protocol that enables an asynchronous connection over a network between a client system and a server system, and allows the client system to send via the network, and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, to query the server system for string-based content, *while receiving an asynchronous response from the server as the characters are being input*.

In view of the above comments, Applicant respectfully submits that Claim 1 is neither anticipated by, nor obvious in view of the cited references, when considered alone or in combination with the knowledge of a person having ordinary skill in the art. Reconsideration thereof is respectfully requested.

Claims 24, 29, 32, 33, 36 and 37

The comments provided above with respect to Claim 1 are hereby incorporated by reference. Claims 24, 29, 32, 33, 36 and 37 have been similarly amended by the current Response to more clearly define the embodiments therein. For similar reasons as provided above with respect to Claim 1, Applicant respectfully submits that Claims 24, 29, 32, 33, 36 and 37, as amended, are likewise neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

In addition, Claims 32 and 33 have been further amended to define that the embodiment therein further comprises *one or more content engine objects*, in communication with the server object, that are capable of retrieving information from a content source containing string-based data by using a lengthening string as part of a content query and by returning matching data from the content source. Applicant respectfully submits that neither Payne nor Danielsen appear to disclose or suggest the use of one or more content engine objects, in communication with the server object, that are capable of retrieving information from a content source containing string-based data by using a lengthening string as part of a content query and by returning matching data from the content source.

In addition, Claims 36 and 37 have been further amended to define that the embodiment therein further comprises a user interface *at a plurality of clients* that allows a user at each of the plurality of clients to enter a string of consecutively input queries to query the server for string-based content, wherein each consecutive query lengthens the query string by one or more additional characters. The server object, automatically matches the lengthening query string against the content of the server, and, as the user of a particular client is entering queries, asynchronously modifies the user interface by returning increasingly relevant server content information to the client object for immediate display to the user. Applicant respectfully submits that neither Payne nor Danielsen appear to disclose or suggest the use of a server object for simultaneously responding to

multiple requests from multiple clients (for example, systems such as those disclosed by Payne instead appear to be designed for use with a database stored locally within a portable device).

Claims 2-15, 17, 25-27, 30-31 and 34-35

Claims 2-15, 17, 25-27, 30-31 and 34-35 depend from and include all of the features of at least one of Claims 1, 24, 29, 32 and 33. Applicant respectfully submits that Claims 2-15, 17, 25-27, 30-31 and 34-35 are allowable as depending upon an allowable independent claim, and further in view of the comments provided above. However, to assist the Examiner in examining these claims, Applicant has provided comments below on several of these claims. Applicant welcomes the opportunity to further discuss any of the additional comments provided herein, at the Examiner's convenience.

Claim 2 defines an embodiment in which the client object operates on or at a first computer and the server object operates on or at a second computer, and wherein both the first and second computers are connected via a communication protocol. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the invention therein is practiced on a mobile device that includes a structured database and a lookup process loaded in the memory of the portable device. As such, Applicant respectfully submits that Payne does not appear to disclose (or have a need for) a first and second computer, or for a network protocol, since the lookup process described therein appears to take place entirely on the portable device.

Claim 4 defines an embodiment in which the system comprises a plurality of server objects that run on a plurality of separate computers, and wherein said client queries are distributed over said separate computers. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that a first portion of indexes from the database is displayed on the screen and a counter is then set to zero, i.e. the client appears to retrieve the plurality of indexes from a single locally stored database. As such, Applicant respectfully submits that Payne does not appear to disclose that the client queries can be distributed over a plurality of server objects, or a plurality of separate computers.

Claim 8 defines an embodiment in which the client software accumulates a plurality of said single character queries as they are entered into the client, before sending the plurality of said

single character queries together as a single string to said server. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the user does not see the desired index in the screen after the first character entry, a second numeric key is pressed for the second character in the desired index, which appears to indicate that, in Payne, each key entered into the keypad is immediately applied against the database, and no form of accumulation is used.

Claim 9 defines an embodiment in which the client object stores previously received responses from the server in a cache at the client and uses the previously received responses as the response to a new query by the user, without re accessing the server. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the invention therein is practiced on a mobile device that includes a structured database and a lookup process loaded in the memory of the portable device. As such, Applicant respectfully submits that, while Payne may provide matching results, these results do not appear to be received from a server; nor do the results appear to be cached. Furthermore, since in Payne the lookup process appears to take place entirely within the portable device, there does not appear to be any motivation to provide a cache of results.

Claim 11 defines an embodiment in which the server stores the state of query and response of the client software, and restores the state of the client software after any interruption in said communication protocol, including an automatic or manual network interruption or termination of the session. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the invention therein is practiced on a mobile device that includes a structured database and a lookup process loaded in the memory of the portable device. As such, Applicant respectfully submits that Payne does not appear to disclose a need for a communication protocol, or for a means to address interruptions in a communication protocol.

Claim 13 defines an embodiment in which the client software identifies a user of the system to the server whereby the server can store statistics and provides a history of queries and corresponding responses appropriate to said user. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears

that the invention therein is practiced on a mobile device, and does not appear to provide a user identification information (to a server or otherwise).

Claim 14 defines an embodiment in which the server system comprises a server tier and a syndication tier, and wherein said client software communicates to the server tier on a single computer, and wherein each query is forwarded by the server tier and the syndication tier to an appropriate syndicate of content channels connected to the server tier on a different computer. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the invention therein is practiced on a mobile device, and does not appear to include any of a server tier, or syndication tier to an appropriate syndicate of content channels connected to the server tier on a different computer.

Claim 17 defines an embodiment in which server responses comprise lists of strings, wherein each string is accompanied by corresponding metadata, whereby the metadata contains logical links to other data sources or Uniform Resource Identifiers. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, as described above, Payne does not appear to disclose the use of Uniform Resource Identifiers.

Claim 31 defines an embodiment in which the server analyzes the time between said consecutive queries received from each client system, and skips selected ones of said consecutive queries to reduce network communications and the load on said content engine. In the Office Action, it was submitted that Payne discloses such an embodiment. However, Applicant respectfully submits that, in Payne, it appears that the invention therein is practiced on a mobile device that includes a structured database and a lookup process loaded in the memory of the portable device. As such, Applicant respectfully submits that Payne does not disclose, or appear to suggest a need for skipping consecutive queries received from each client system, or to otherwise reduce network communications.

Claims 3, 5-7, 10, 12, 15, 25-30 and 32-35 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the amendments to the independent claims and the comments provided above.

In view of the above comments, Applicant respectfully submits that neither Payne nor Danielsén, when considered alone or in combination, appear to disclose or suggest the particular

combination of features defined by each of the dependent claims above. Reconsideration thereof is respectfully requested.

IV. Additional Amendments

Claims 38-60 have been newly added by the present Response. Applicant respectfully requests that new Claims 38-60 be included in the Application and considered therewith.

V. Conclusion

In view of the above amendments and remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136 for extending the time to respond up to and including November 25, 2007.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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